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Teacher Inquiry Defined

Teaching involves a search for meaning in the world. Teaching is a life project, a calling, a vocation that is an organizing center of all other activities. Teaching is past and future as well as present, it is background as well as foreground, it is depth as well as surface. Teaching is pain and humor, joy and anger, dreariness and epiphany. Teaching is world building, it is architecture and design, it is purpose and moral enterprise. Teaching is a way of being in the world that breaks through the boundaries of the traditional job and in the process redefines all life and teaching itself.

—William Ayers (1989, p. 130)

Whether you are a beginning or veteran teacher, an administrator, or a teacher educator, when you think of teaching, learning to teach, and continuing one's growth as a teacher, you cannot help but be struck by the enormous complexities, paradoxes, and tensions inherent in the simple act of teaching itself, captured so eloquently in the quote from William Ayers. With all of these complexities, paradoxes, and tensions, a teacher's work shapes the daily life of his or her classroom. In addition to responding to the needs of the children within the classroom, a teacher is expected to implement endless changes advocated by those outside the four walls of the classroom—administrators, politicians, and researchers. While teachers have gained insights into their educational practice from

these three groups, teachers' voices have typically been absent from larger discussions about educational change and reform. Historically, teachers have not had access to tools that could have brought their knowledge to the table and raised their voices to a high-enough level to be heard in these larger conversations. Teacher inquiry is a vehicle that can be used by teachers to untangle some of the complexities that occur in the profession, raise teachers' voices in discussions of educational reform, and ultimately transform assumptions about the teaching profession itself. Transforming the profession is really the capstone of the teacher inquiry experience. Let's begin our journey into the what, why, and how of teacher inquiry with an overview of the evolution of the teacher inquiry movement and a simple definition of this very complex, rewarding, transformative, provocative, and productive process.

WHAT IS TEACHER INQUIRY?

Understanding the history of teacher inquiry will help you recognize how today, as a current or future educator, you find yourself investigating a new paradigm of learning that can lead to educational renewal and reform. This history lesson begins by looking closely at three educational research traditions: process-product research, qualitative or interpretive research, and teacher inquiry (see Table 1.1).

Two paradigms have dominated educational research on schooling, teaching, and learning in the past. In the first paradigm, the underlying conception of "process-product research" (Shulman, 1986) portrays teaching as a primarily linear activity and depicts teachers as technicians. The teacher's role is to implement the research findings of "outside" experts, almost exclusively university researchers, who are considered alien to the everyday happenings in classrooms. In this transmissive mode teachers are not expected to be problem posers or problem solvers. Rather, teachers negotiate dilemmas framed by outside experts and are asked to implement with fidelity a curriculum designed by those outside of the classroom. Based on this paradigm, many teachers have learned that it is sometimes best not to problematize their classroom experiences and firsthand observations because to do so may mean an admittance of failure to implement curriculum as directed. In fact, the transmissive culture of many schools has demonstrated that teachers can suffer punitive repercussions from highlighting areas that teachers themselves identify as problematic. The consequences of pointing out problems have often resulted in traditional top-down "retraining" or remediation. In the transmissive view, our educational community does not encourage solution-seeking behavior on the part of classroom teachers.

In the second paradigm—educational research drawn from qualitative or interpretative studies—teaching is portrayed as a highly complex,

Table 1.1 Competing Paradigms: The Multiple Voices of Research

	Research Paradigms		
	Process-Product	*Qualitative or Interpretive*	*Teacher Inquiry*
Teacher	Teacher as technician	Teacher as story character	Teacher as storyteller
Researcher	Outsider	Outsider	Insider
Process	Linear	Discursive	Cyclical
Source of research question	Researcher	Researcher	Teacher
Type of research question	Focused on control, prediction, or impact	Focused on explaining a process or phenomenon	Focused on providing insight into a teacher's classroom practice in an effort to make change
Example of research question	Which management strategy is most successful?	How do children experience bullying in the classroom?	How can I accommodate ESL students at the kindergarten writing table?

context-specific, interactive activity. In addition, this qualitative or interpretive paradigm captures differences across classrooms, schools, and communities that are critically important. Chris Clark (1995) identifies the complexity inherent in a teacher's job and the importance of understanding and acknowledging contextual differences as follows: "Description becomes prescription, often with less and less regard for the contextual matters that make the description meaningful in the first place" (p. 20).

Although qualitative or interpretive work attends to issues of context, most of the studies emerging from this research paradigm are conducted by university researchers and are intended for academic audiences. Such school-university research provides valuable insights into the connections between theory and practice, but, like the process-product research, the qualitative or interpretive approach limits teachers' roles in the research process. In fact, the knowledge about teaching and learning generated through university study of theory and practice is still defined and generated by "outsiders" to the school and classroom. While both the process-product and qualitative research paradigms have generated valuable insights into the teaching and learning process, they have not included the voices of the people closest to the children—classroom teachers.

Hence, a third research tradition emerges highlighting the role classroom teachers play as knowledge generators. This tradition is often referred to as "teacher research," "teacher inquiry," "classroom research," "action research," or "practitioner inquiry." In general, the teacher inquiry movement focuses on the concerns of teachers (not outside researchers) and engages teachers in the design, data collection, and interpretation of data around a question. Termed "action research" by Carr and Kemmis (1986), this approach to educational research has many benefits: (1) Theories and knowledge are generated from research grounded in the realities of educational practice, (2) teachers become collaborators in educational research by investigating their own problems, and (3) teachers play a part in the research process, which makes them more likely to facilitate change based on the knowledge they create.

Elliot (1988) describes action research as a continual set of spirals consisting of reflection and action. Each spiral involves (1) clarifying and diagnosing a practical situation that needs to be improved or a practical problem that needs to be resolved; (2) formulating action strategies to improve the situation or resolve the problem; (3) implementing the action strategies and evaluating their effectiveness; and (4) clarifying the situation, resulting in new definitions of problems or areas for improvement, and so on, to the next spiral of reflection and action.

Note that in our description of this third research tradition we have used a number of terms synonymously—teacher research, action research, classroom research, practitioner inquiry, and teacher inquiry. While these phrases have been used interchangeably, they do have somewhat different emphases and histories (Cochran-Smith & Lytle, 2009). Action research, for instance, usually refers to research intended to bring about change of some kind, usually with a social justice focus, whereas teacher research quite often has the goal only of examining a teacher's classroom practice in order to improve it or to better understand what works. For the purposes of this text and to streamline our discussion of research traditions, we have grouped all of these related processes together to represent teachers' systematic study of their own practice. Yet we use the term *inquiry* most often as, in our own coaching of teachers' systematic study of their own practice, we became discouraged by the baggage that the word *research* in the term *action research* carried with it when the concept was first introduced to teachers. The images that the word *research* conjures up come mostly from the process-product paradigm and include a "controlled setting," "an experiment with control and treatment groups," "an objective scientist removed from the subjects of study so as not to contaminate findings," "long hours in the library," and "crunching numbers." Teachers, in general, weren't overly enthused by these images, and it took a good deal of time for us to deconstruct these images and help teachers see that those images were antithetical to what teacher/action research was all about. So, over time, we began replacing the terms *action research* and *teacher research* with

one simple word that carried much less baggage with it—*inquiry*—and we will continue this tradition both in this section on research traditions and throughout the remainder of this text.

To help unpack some of the baggage the word *research* carries with it, it is important to further explore the difference between research conducted in a university setting (stemming from the process-product and interpretive paradigms) and inquiry conducted by classroom teachers. First and foremost, in general, the purpose of research conducted by academics and classroom teachers is quite different. The general focus of university-based research is to advance a field. Professors are required to publish their work in journals read by other academics and present their work at national and international venues to their peers at other institutions as evidence of their ability to impact the field broadly. In fact, professors' value within an institution is measured largely by their publication record and the number of times their publications are cited by others. In contrast, the purpose of engagement in inquiry by classroom teachers is to improve classroom practice. The point of doing inquiry is for implementation and change, not for academic impact (although this can happen too).

The focus of university-based researchers and teacher inquirers is also different. In general, university-based researchers working in the process-product paradigm focus their efforts on control, prediction, and impact, and university-based researchers working in the interpretive paradigm focus their efforts on description, explanation, and understanding of various teaching phenomena. In contrast, teacher-inquirers focus on providing insights into teaching in an effort to make change, working tirelessly to unpack all of the complexities inherent in the act of teaching to become the very best teachers they can be for every individual student.

A final difference between research conducted at the university and inquiry conducted by classroom teachers into their own practice is ownership. While the research generated by university researchers is critically important to teachers, it is university researchers who make the decisions about what is important to study and how to go about studying it based on a careful and critical analysis of a broad and extensive body of literature related to the topic of study. In contrast, teacher-inquirers make decisions about what is important to study and how to go about studying it based on a careful and critical analysis of what is happening at a local level in their own classrooms, schools, and districts. The work of university-based researchers informs the inquiries of teachers, but ownership of the classroom-based investigation resides with the classroom teacher herself.

To help distinguish between research produced at a university and inquiry done in classrooms and schools (summarized in Table 1.2), we often invoke the words of Lawrence Stenhouse, who noted "that the difference between a teacher-researcher and the large-scale education

researcher is like the difference between a farmer with a huge agricultural business to maintain and the 'careful gardener' tending a backyard plot" (Hubbard & Power, 1999, p. 5).

> In agriculture the equation of invested input against gross yield is all: it does not matter if individual plants fail to thrive or die so long as the cost of saving them is greater than the cost of losing them. . . . This does not apply to the careful gardener whose labour is not costed, but a labour of love. He wants each of his plants to thrive, and he can treat each one individually. Indeed he can grow a hundred different plants in his garden and differentiate his treatment of each, pruning his roses, but not his sweet peas. Gardening rather than agriculture is the analogy for education. (Ruddock & Hopkins, 1985, p. 26)

This image of the university-based researcher as a farmer with a huge agricultural business and the teacher-inquirer as a gardener helps to encapsulate the differences between the university-based research you are likely most familiar with and the research you can generate from within the four walls of your own classroom. It is of value to note that the work of both farmers and gardeners is important and somewhat related but also quite different. Such is the case with university-based researchers and teacher-inquirers. The work of both is important and somewhat related but quite different. As we discuss each component of the inquiry process in depth throughout this book, you will continue to uncover the importance of both types of research, including the relationship between them and the differences.

Now that we have explored three educational research traditions, acknowledged the limitations of the first two traditions, introduced teacher inquiry, and explicated the differences between university-based research and teacher inquiry, our brief history lesson might suggest that teacher inquiry is just another educational fad. However, although the terms *teacher research, action research,* and *teacher inquiry* are comparatively

Table 1.2 University-based research and teacher inquiry comparison

	University Research	*Teacher Research (Inquiry)*
PURPOSE	Advance a field	Improve classroom practice
FOCUS	Control/Prediction/Impact/ Explanation	Provide insight into teaching in an effort to make change
OWNERSHIP	Outsider	Insider
IMPACT	Broad	Local

new, the underlying conceptions of teaching as inquiry and the role of teachers as inquirers are not. Early in the 20th century, John Dewey (1933) called for teachers to engage in "reflective action" that would transition them into inquiry-oriented classroom practitioners. Similarly, noted teacher educator Ken Zeichner (1996) traces and summarizes more than 30 years of research, calling for cultivating an informed practice as illustrated in such descriptors as "teachers as action researchers," "teacher scholars," "teacher innovators," and "teachers as participant observers" (p. 3). Similarly, distinguished scholar Donald Schon (1983, 1987) also depicts teacher professional practice as a cognitive process of posing and exploring problems or dilemmas identified by the teachers themselves. In doing so, teachers ask questions that other researchers may not perceive or deem relevant. In addition, teachers often discern patterns that "outsiders" may not be able to see.

Given today's political context, where much of the decision making and discussion regarding teachers occur outside the walls of the classroom (Darling-Hammond, 1994; Cochran-Smith & Lytle, 2006), the time seems ripe to create a movement where teachers are armed with the tools of inquiry and committed to educational change. In the words of Joan Thate, one teacher researcher we have worked with:

> Teachers have for so long had perfunctory or no influence on school policy, on curriculum frameworks, on time use, on professional standards—or pretty much anything involving their work experience—EXCEPT in the privacy of their own classrooms. I think this is why the deadly and stifling isolation has become such an intractable monolith. We're all trying to preserve the one area in which we have some choice. But I have long known—gut knowledge eventually found words—that in preserving isolation we were doomed to forever have the locus of power stay in other hands than ours. And real power could only come when we could justifiably say: we know what's best because we have tested the possibilities and have found what works. Inquiry is exciting because it allows for the testing of ideas in real life, and begins to give us the concrete support for insisting attention be paid to what we have to say. (Thate, 2007a)

If that is our goal, we now need to understand how teacher inquiry can serve as a tool for professional growth and educational reform. We believe that the best stated definitions of teacher research come from teacher-inquirers themselves. We end this section with a few from teachers we have collaborated with on inquiry:

> Very simply put, inquiry is a way for me to continue growing as a teacher. Before I became involved in inquiry I'd gotten to the point where I'd go to an inservice and shut off my brain. Most of the

> teachers I know have been at the same place. If you have been around at all you know that most inservices are the same cheese—just repackaged. Inquiry lets me choose my own growth and gives me tools to validate or jettison my ideas. (Kreinbihl, 2007)

> You know that nagging that wakes you in the early hours, then reemerges during your morning preparation time so you cannot remember if you already applied the deodorant, later on the drive to school pushing out of mind those important tasks you needed to accomplish prior to the first bell, and again as the students are entering your class and sharing all the important things happening in their lives. Well, teacher inquiry is the formal stating of that nagging, developing a plan of action to do something about it, putting the plan into action, collecting data, analyzing the collected works, making meaning of your collection, sharing your findings, then repeating the cycle with the new nagging(s) that sprouted up. (Hughes, 2007)

> Teacher inquiry is not something I do; it is more a part of the way I think. Inquiry involves exciting and meaningful discussions with colleagues about the passions we embrace in our profession. It has become the gratifying response to formalizing the questions that enter my mind as I teach. It is a learning process that keeps me passionate about teaching. (Hubbell, 2007)

WHAT IS THE RELATIONSHIP BETWEEN TEACHER INQUIRY AND TEACHER PROFESSIONAL GROWTH?

Simply stated, teacher inquiry is defined as systematic, intentional study of one's own professional practice (see, e.g., Cochran-Smith & Lytle, 1993; Dana, Gimbert, & Silva, 1999; Hubbard & Power, 1993). Inquiring professionals seek out change by reflecting on their practice. They do this by posing questions or "wonderings," collecting data to gain insights into their wonderings, analyzing the data along with reading relevant literature, making changes in practice based on new understandings developed during inquiry, and sharing findings with others. Hence, whether you are a prospective teacher at the dawn of your teaching career or a veteran teacher with years of experience facing new educational challenges every day, teacher inquiry becomes a powerful vehicle for learning and reform.

As a teacher-inquirer in charge of your own learning, you become a part of a larger struggle in education—the struggle to better understand, inform, shape, reshape, and reform standard school practice (Cochran-Smith, 1991).

Teacher inquiry differs from traditional professional development for teachers, which has typically focused on the knowledge of an outside "expert" being shared with a group of teachers. This traditional model of professional growth, usually delivered as a part of traditional staff development, may appear an efficient method of disseminating information but often does not result in real and meaningful change in the classroom.

Those dissatisfied with the traditional model of professional development suggest a need for new approaches that enhance professional growth and lead to real change. For example, over 40 years ago, Goldhammer (1969) emphasized the need for supervision to become an opportunity to help teachers understand what they are doing and why, by changing schools from places where teachers just act out "age-old rituals" to places where teachers participate fully in the supervision process and their own professional growth. Nolan and Huber (1989) described teacher reflection, a key component of inquiry, as the "driving force" behind successful professional development programs. They described successful professional development programs as "making a difference in the lives and instruction of teachers who participate in them, as well as the lives of the students they teach" (p. 143). More recently, in the *Journal of Staff Development*, educators from across the country put forth their vision for "The Road Ahead" for professional learning. These ideas included the importance of creating activities, tools, and contexts that blend theory and practice (Darling-Hammond, 2007); supporting collaborative learning structures that deepen innovation implementation efforts (DuFour & DuFour, 2007); strengthening professionalism by recognizing the complexity and importance of teacher professional knowledge (Elmore, 2007; Hord, 2007; Schlechty, 2007); and making professional learning a part of the everyday work of each teacher in every classroom (Fullan, 2007).

Consonant with the movement to change traditional professional development practices is the teacher inquiry movement. This movement toward a new model of professional growth based on inquiry into one's own practice can be powerfully developed by school districts and building administrators as a form of professional development. By participating in teacher inquiry, the teacher develops a sense of ownership in the knowledge constructed, and this sense of ownership heavily contributes to the possibilities for real change to take place in the classroom.

The ultimate goal is to create an inquiry stance toward teaching (Cochran-Smith & Lytle, 2009). This stance becomes a professional positioning, owned by the teacher, where questioning one's own practice becomes part of the teacher's work and eventually a part of the teaching culture. By cultivating this inquiry stance toward teaching, teachers play a critical role in enhancing their own professional growth and, ultimately, the experience of schooling for children. Thus, an inquiry stance is synonymous with professional growth and provides a nontraditional approach to staff development that can lead to meaningful change for children.

WHAT EVIDENCE EXISTS THAT TEACHER INQUIRY IS WORTH DOING?

At this point in the chapter, you may be thinking that this process called teacher inquiry sounds okay in theory, but you have developed a healthy skepticism. The everyday work of teaching is challenging, and teachers are constantly asked to do more and more with less and less. If teachers are to incorporate inquiry into their very full days, it's important to know what evidence exists that it is truly worth doing.

Fortunately, evidence abounds that teachers' engagement in inquiry is indeed worth the effort. The first set of evidence comes from teachers themselves who have published their work. There are numerous collections of teacher research, and from reading and analyzing the work of actual teacher researchers that appear in these collections, it is clear that engagement in inquiry can have a powerful impact on the professional learning of teachers and the lives of the students in their classrooms. Some of our favorite collections of teacher research include the following:

- *Creating Equitable Classrooms Through Action Research* (Caro-Bruce, Flessner, Klehr & Zeichner, 2007). This book shares the research of 10 educators from the Madison Wisconsin Metropolitan School District, whose inquiries focused on making their school district a more equitable place for all learners.
- *Taking Action With Teacher Research* (Meyers & Rust, 2003). This book shares the research of six teacher researchers from the Teacher Network Leadership Institute in New York, whose inquiries focused on political action.
- *Empowering the Voice of the Teacher Researcher: Achieving Success Through a Culture of Inquiry* (Brindley & Crocco, 2009). This book shares the research of six teacher researchers from a single school in Florida, whose inquiries focus on better meeting the needs of middle school children.
- *Our Inquiry, Our Practice: Undertaking, Supporting, and Learning From Early Childhood Teacher Research(ers)* (Perry, Henderson, & Meier, 2012). This book shares the research of six early childhood professionals, working in both primary grades and preschool, as well as reviews some of the finer points of the inquiry process and how it is particularly suited for early childhood contexts.
- *Teachers Engaged in Research* (Langrall, 2006; Masingila, 2006; Smith & Smith, 2006; Van Zoest, 2006). This four-volume series published by the National Council of Teachers of Mathmatics (NCTM) shares the inquiries of several teachers into their mathematics teaching in Grades K–2, 3–5, 6–8, and 9–12, respectively.

The second set of evidence that teacher inquiry is worth doing comes from university-based researchers. There is a large body of university-based research conducted on both preservice and practicing teachers engaged in the inquiry process to better understand the impact of their work. While it is beyond the scope of this book to review all of the empirical studies completed by academics focused on teachers' engagement in inquiry, many of these studies are reviewed and referenced in Marilyn Cochran-Smith and Susan Lytle's book *Inquiry as Stance: Practitioner Research for the Next Generation* (2009). It is clear in this text from the extensive review of research on teacher inquiry that engaging in the inquiry process results in several benefits for both perservice teachers who conduct inquiry as a part of their studies in teaching at the university and practicing teachers who conduct inquiry as part of their everyday work in schools.

The publications by teachers of their own inquiries as well as publications by university-based researchers that report research efforts to understand the impact of teachers' engagement in the process attest to the important role inquiry can play in the lives of teachers and the children they teach. An additional source of evidence of the value inherent in engagement in inquiry comes from the ways inquiry can interface with many current initiatives and processes underway in schools. Some of these current initiatives and processes include differentiated instruction, data-driven decision making, progress monitoring, Response to Intervention, lesson study, teacher evaluation, and the Common Core State Standards.

WHAT IS THE RELATIONSHIP BETWEEN TEACHER INQUIRY AND DIFFERENTIATED INSTRUCTION?

The most important benefactors of taking an inquiry stance toward teaching and actualizing that stance by engaging in action research are the students you teach. Just as teaching is complex, so is the makeup of each individual student that walks through your classroom door. Each student enters your classroom with unique life experiences as well as differing social, emotional, and academic needs. Each student who enters your classroom varies in background knowledge, readiness, language, preferences in learning, and interests. Yet, in the ways traditional school structures are set up, individual needs can easily become lost.

One current emphasis in the field of education targeted at making visible individual student needs that can become lost in traditional school structures is differentiated instruction (Sousa & Tomlinson, 2010; Tomlinson, 2001, 1999; Tomlinson & Imbeau, 2010). According to Hall (2002),

> Differentiated instruction applies an approach to teaching and learning so that students have multiple options for taking in information and

> making sense of ideas. The model of differentiated instruction requires teachers to be flexible in their approach to teaching and adjusting the curriculum and presentation of information to learners rather than expecting students to modify themselves for the curriculum. (n.p.)

Through engaging in action research, teachers can generate valuable knowledge about their learners' readiness, interest, learning styles, and more! With this knowledge, teachers make adaptations to instruction, increasing the probability that the needs of *all* learners will be met within one single class period or lesson.

For example, through engaging in action research to better understand the reading habits of his high school seniors, Tom Beyer (2007) adjusted his summer reading list and built in choice for his students, accommodating the vast differences in their interests his research uncovered. Engaging in action research to ascertain better ways to structure chemistry extra-help sessions, Steve Burgin (2007a) adjusted his approach to these sessions to accommodate both his general-chemistry students, who benefited from an enriched repeat version of a lesson on a particular chemistry concept taught during the regular school day, and his honors students who benefited from independently working though more challenging chemistry problems based on particular concepts to be tested in an upcoming exam. Through engaging in action research to better understand student anxiety associated with the upcoming probability and statistics unit, Kristin Weller (2007) rewrote her lessons that strictly followed the adopted mathematics text book to introduce the same concepts through studying the upcoming NCAA basketball tournament and the odds of each team reaching the Final Four. Action research is a wonderful tool teachers can use to differentiate instruction, ultimately making schools a better place for all students, regardless of their interests, abilities, background, and learning styles.

WHAT IS THE RELATIONSHIP BETWEEN TEACHER INQUIRY, DATA-DRIVEN DECISION MAKING, AND PROGRESS MONITORING?

In line with the goals of teacher research, data-driven decision making (DDDM) and progress monitoring are two professional activities that school reformers suggest will lead to improved student learning. According to Scott McLeod (2007), DDDM is a system of teaching and management practices that places information about students into practitioners' hands. Data-driven decision making is embedded in teacher inquiry as teachers use assessment data and background information to inform decisions related to planning and implementing instructional strategies at the school, classroom, or individual student levels.

Similarly, the National Center of Student Progress Monitoring (2007) defines progress monitoring as "a scientifically based practice that is used to assess students' academic performance and evaluate the effectiveness of instruction." Teachers engaged in progress monitoring follow a series of stages embedded in the teacher research process, including identifying students' current level of performance, establishing learning goals that will be targeted during the inquiry, monitoring students' academic performance on a regular basis, comparing expected and actual rates of learning, and adjusting instruction based on these data.

Given these definitions, DDDM is used to inform decisions prior to instruction, and progress monitoring is used to assess the effectiveness of the instruction. In combination, data-driven decision making and progress monitoring share the same basic steps underlying the "cycle of inquiry." For example, when teacher-inquirer Debbi Hubbell reviewed multiple sources of reading data, including student performance on her state's assessment test, DIBELS (Dynamic Indicators of Basic Early Literacy Skills) test scores, and informal assessments, she decided that a subset of her students struggled with reading fluency. In response, she selected instructional interventions that targeted fluency and then used progress monitoring to understand the degree of student growth after the intervention. Her teacher research work integrated both data-driven decision making and progress monitoring.

Central to the success of data-driven decision making, progress monitoring, and teacher research is the degree of teacher "data literacy." Data literacy refers to the teacher's basic understanding of how data can be used to inform instruction, which assessment is a valid and reliable measure of what is being taught, and what types of assessments are appropriate for district-, classroom-, or individual student–level decision making. In returning to Debbi Hubbel's teacher research, Debbi had a sophisticated ability to interpret the high-stakes scores as well as identify valid and reliable tools that could measure her students' fluency development. Teacher researchers, data-driven decision makers, and progress monitors are aware of the problems associated with an overreliance on high-stakes testing. As described, Debbi Hubbell used multiple types of data (e.g., DIBELS, running records, informal observation) to study her students and discovered what worked within her specific classroom. Teachers who effectively use data within the teacher-research process find that identifying the right kind of data to use in their work can improve their instructional interventions, reenergize their enthusiasm for teaching, and increase their feelings of professional fulfillment and job satisfaction.

McLeod (2007) explains that "data-driven decision making requires an important paradigm shift for teachers—a shift from day-to-day instruction that emphasizes process and delivery in the classroom to pedagogy that is dedicated to the achievement of results" (p. 1). Fundamental to teacher research, data-driven decision making, and progress monitoring is the

importance of helping practitioners develop the inclination to wonder, "Is there a better way?" and "How can I do things differently?" This inclination is essential to the teacher-research movement. By embracing an inquiry approach, teachers expand their idea of what data are and how using data can inform their teaching and enhance student learning. The inquiry stance embraced by teacher researchers supports both data-driven decision making and progress monitoring.

WHAT IS THE RELATIONSHIP BETWEEN TEACHER INQUIRY AND RESPONSE TO INTERVENTION (RTI)?

Another approach that shares similarities with teacher inquiry and is receiving current attention from educators across the United States is referred to as Response to Intervention or RtI. Response to Intervention is an intervention approach that is a part of the eligibility process for emotional behavior disorders (EBD) and specific learning disabilities (SLD) and is strongly supported by both the Individuals with Disabilities Education Act (IDEA) and No Child Left Behind (NCLB). However, the application of RtI is much broader than a screening process to determine special education eligibility. The goal of RtI is to prevent unnecessary student assignment to special education by offering low-performing students intense, individualized academic intervention paired with systematic study of the intervention. According to Jim Wright (2007), a school psychologist and administrator from central New York, RtI gives a student with delays one or more research-validated interventions. As the intervention is used, the student's learning is systematically studied or monitored to identify whether the interventions will allow the student to catch up with his or her peers.

The RtI process follows the inquiry process described in this book as the intervention is systematically studied. The process begins with problem analysis that identifies the desired change for the student experiencing academic or behavioral difficulty. Next, educators design and implement an evidence-based intervention. Finally, the effectiveness of the intervention is determined by synthesizing and analyzing the data collected. This step is termed Response to Intervention because during this step a student's response to the implemented intervention is measured to evaluate the effectiveness of the instruction. Just as inquiry focuses on the systematic and intentional collection of data focused on a wondering, in RtI, educators focus on systematically and intentionally collecting data to understand if the response to the intervention results in adequate academic and/or behavioral growth. According to Jim Wright (2007), to implement RtI effectively,

> schools must develop a specialized set of tools and competencies, including a structured format for problem-solving, knowledge of

a range of scientifically based interventions that address common reasons for school failure, and the ability to use various methods of assessment to monitor student progress in academic and behavioral areas.

Given the sophistication that educators need in each step of the inquiry process as well as the importance of adequate knowledge of powerful interventions, the success of RtI will likely depend on whether the process is appropriately implemented and whether an inquiry stance is embraced by highly skilled professionals. The inquiry process illustrated within this book can offer support to those engaged in RtI. In fact, RtI can literally become one form of inquiry occurring in a school or across a district.

WHAT IS THE RELATIONSHIP BETWEEN TEACHER INQUIRY AND LESSON STUDY?

Inquiry is often tied directly to curriculum and its implementation. When curriculum and its implementation is the focus of inquiry, inquiry shares all of the same core features of the popular professional development strategy termed *lesson study*. As a professional development strategy, lesson study allows teachers to systematically and collaboratively examine and improve their teaching practice through "studying" lessons. Teachers create study lessons together by planning, teaching, observing, critiquing, and revising the lessons as a group. This spiraling process is driven by an overarching goal and a research question shaped by the group. The end result is not only a better developed lesson, but typically teachers also develop a stronger understanding of the content, enhanced observation skills, stronger collegial networks, and a tighter connection between daily practice and long-term goals (Lewis, Perry, & Hurd, 2004). In essence, lesson study becomes a specialized form of the inquiry process focused on the planning and teaching of one lesson and the ways that lesson plays out for multiple teachers and learners in a school or across multiple schools in a district. Like RtI, described in the previous section, lesson study can literally become one form of inquiry occurring in a school and/or across a district.

WHAT IS THE RELATIONSHIP BETWEEN TEACHER INQUIRY AND TEACHER EVALUATION?

Teacher evaluation has gained increasing attention in the last decade as policymakers and school district officials work in tandem to assure that every child has a qualified teacher. These evaluation efforts are designed to provide the pressure that when coupled with support (Fullan, 2009) can lead to improved teaching practices. Too often school districts identify

evaluation techniques that provide pressure for teachers to improve without dedicating adequate attention and resources to the supports teachers need to be successful. Teacher inquiry is one of the support structures that school districts can pair with evaluation to enhance teaching and learning.

Many school districts have identified frameworks that they believe make explicit performance expectations for educators. These frameworks include, but are not limited to, the work of Charlotte Danielson (2006) and Robert Marzano (2007). For example, Danielson's framework is comprised of research-based instructional components grounded in a constructivist view of learning and teaching while Marzano's framework is comprised of 41 strategies that he believes a comprehensive language of instruction should include. Teacher inquiry provides a process for educators to systematically and intentionally investigate components of frameworks, like these, that they themselves identify as areas of need or that others have identified as challenges to their teaching effectiveness. The process of inquiry can empower the educator to set important goals related to the evaluation frameworks, study his or her own practice in an identified area of weakness, and reflect on ways to continually improve performance. In many ways, districts that do not provide this kind of support are engaged in their own special version of educational malpractice. Teacher inquiry is a tool for supporting teachers as they seek to improve instruction.

Illustrating the ways inquiry can fit appropriately within a teacher evaluation system, the Anacortes School District in the state of Washington has embedded the inquiry cycle into their teacher evaluation process (see www.asd103.org/pages/Anacortes_School_District/Staff/Teacher_Principal_Evaluation). Anacortes School District Teacher Association president Jennie Beltramini describes their teacher evaluation system as follows:

> In Anacortes, we set out to develop a new teacher and principal evaluation model for the purpose of fostering professional growth. While we acknowledge that the traditional purpose of evaluation is accountability and making employment decisions, accountability and employment decisions only serve a small minority of teachers and principals. In order to leverage the evaluation system to promote professional growth among all satisfactory performing teachers and principals, we needed a new system comprised of feedback on research-based instructional and leadership frameworks and student growth, as well as a structured, supported, job-embedded professional growth model to ensure growth.
>
> In Anacortes, we chose to use the Cycle of Inquiry to support teacher and principal professional growth within the evaluation system. Armed with detailed, specific data about their teaching and student growth via the evaluation system, teachers were ready to ask relevant inquiry questions about challenges they were facing

> with their practice. All teachers develop an inquiry plan of action trying new teaching strategies informed by the evaluation rubric, carry out a Cycle of Inquiry, and collect data on their students and their own teacher practices to measure the impact of their actions. Principals also carry out a Cycle of Inquiry based on their leadership practices each year. With the support of inquiry facilitators/teacher leaders in each school building, as well as inquiry-oriented PLCs, teachers and principals have a structure and the support they need to make lasting improvements to their practice. (Beltramini, personal communication, 9/15/13)

By coupling teacher inquiry and teacher evaluation, this district has integrated both pressure and support to improve teaching performance.

WHAT IS THE RELATIONSHIP BETWEEN TEACHER INQUIRY AND THE COMMON CORE STATE STANDARDS?

The Common Cores State Standards, designed "to provide a clear and consistent framework to prepare our children for college and the workforce" (NGA & CCS, 2012a), are everywhere! Forty-five states, the District of Columbia, four territories, and the Department of Defense Education Activity have adopted them. Common Core workshops, websites, conferences, webinars, and in-service days abound as teachers work to figure out what difference the Common Core will make to their everyday teaching practice.

Perhaps the most important difference the Common Core will make to teachers and the students they teach is that teachers "are not merely the recipients of standards, but the architects of their implementation" (Dunkle, 2012, p. x). During the era of high-stakes testing that preceded the Common Core, teachers were often handed teacher editions to textbooks and pacing guides that determined every minute detail of when, how, and what they would teach their students. Teachers lost the ability to be creative with their students, to enact "teachable moments," to respond to their students' needs, and to make instructional decisions in the best interest of the children they teach. Subsequently, in many cases the rigidity of the high-stakes testing regime resulted in students who were not engaged or excited about learning. The joy of teaching and the love of learning were literally sucked out of many classrooms across the nation.

In contrast to rigid adherence to a long list of standards that mandate what, how, and when to teach, the Common Core gives teachers and schools a lot of flexibility. If implemented as intended, the CCSS will be used as a *guide* rather than a *bible.* The standards are not a curriculum that tells teachers *how* they will teach but rather where they need to go with

their students (NGA & CCSS, 2012b). And, most importantly, it is teachers themselves that make the decisions regarding how to get their students where they need to go! This creates the potential for a much more dynamic and engaging curriculum for both teachers and students.

The potential for a much more dynamic and engaging curriculum is good reason to learn more about the Common Core and how it can be actualized in practice. While it will be important for teachers to read about the standards and attend workshops and webinars to develop content knowledge about the Common Core, these professional development mechanisms alone are not enough to help teachers become architects of the Common Core's implementation.

This is where teacher inquiry enters the Common Core picture. Engagement in inquiry is a logical mechanism with which teachers and administrators can gain insights into the CCSS, what the Common Core means for teachers and students, and how the Common Core can be actualized within the reality of teachers' everyday work with students in the classroom. The inquiry process can help teachers gain insights into the Common Core as teachers try out new techniques and strategies related to Common Core implementation in their classrooms (Dana, Burns, & Wolkenhauer, 2013).

HOW IS TEACHER INQUIRY DIFFERENT FROM WHAT I ALREADY DO AS A REFLECTIVE TEACHER?

All teachers reflect. They reflect on what happened during previously taught lessons as they plan lessons for the future. They reflect on their students' performance as they assess their work. They reflect on the content and the best pedagogy available to teach that content to their learners. They reflect on interactions they observed students having, as well as on their own interactions with students and the ways these interactions contribute to learning. Teachers reflect all day, every day, *on* the act of teaching while *in* the act of teaching and long after the school day is over.

Reflection is important and critical to good teaching (Schon, 1987; Zeichner & Liston, 1996). In addition, reflection is a key component of teacher inquiry. Yet teacher inquiry is different from daily reflection in and on practice in two important ways. First, teacher inquiry is less happenstance. The very definition of teacher inquiry includes the word *intentional.* We do not mean to suggest that reflection is never intentional, but in the busy, complex life of teaching, reflection is something that occurs most often in an unplanned way, for example, on the way to the teachers' room for lunch, during a chat with a colleague during a special, when students are engaged in an independent activity, on the drive home, in the shower, or during dinner—wherever and whenever a moment arises. Unfortunately,

few teachers have a planned reflection time. Teacher inquiry invites intentional, planned reflection, heightening your focus on problem posing. Second, teacher inquiry is more visible. The daily reflection teachers engage in is not observable by others unless it is given some form (perhaps through talk or journaling). As teachers engage in the process of inquiry, their thinking and reflection are made public for discussion, sharing, debate, and purposeful educative conversation, and teaching becomes less isolated and overwhelming. Gail Ritchie, veteran teacher researcher from Fairfax County Schools, Virginia, notes that the goal of being a teacher researcher is to facilitate teaching and learning and maximize student potential. As a teacher researcher engages in reflection, she intentionally asks questions about teaching and learning, organizes and collects information, focuses on a specific area of inquiry, and benefits from ongoing collaboration and support of critical friends (Lassonde, Ritchie, & Fox, 2008).

WHAT ARE SOME CONTEXTS RIPE FOR TEACHER INQUIRY?

With an understanding of what teacher inquiry is; how it contributes to professional growth; how it relates to differentiating instruction, data-driven decision making, progress monitoring, RtI, lesson study, teacher evaluation, and the Common Core State Standards; and how it differs from natural, daily reflection, let us consider the kinds of contexts that support teacher inquiry. As previously discussed, teaching is full of enormous complexities, paradoxes, and tensions, and hence, teaching itself invites inquiry. However, even as inquiry beckons each and every teacher, becoming a "lone inquirer" is difficult! For this reason, we explore three particularly ripe contexts for facilitating the development of an inquiry stance in practicing and prospective teachers: professional learning communities, student teaching and/or other clinical experiences, and professional development schools. You may currently be a part of one of these three contexts or you may wish to seek these contexts out as you begin or continue your teaching career.

Professional Learning Communities

Professional learning communities (PLCs) serve to connect and network groups of professionals to do just what their name entails—*learn* from practice. Professional learning communities meet on a regular basis, and their time together is often structured by the use of protocols to ensure focused, deliberate conversation and dialogue by teachers about student work and student learning. Protocols for educators provide a script or series of timed steps for how a conversation among teachers on a chosen topic will develop.

A variety of protocols have been developed for use in professional learning communities by a number of noteworthy organizations such as the National Staff Development Council (see, for example, Lois Brown Easton's *Powerful Designs for Professional Learning*, 2004), the Southern Maine Partnership (http://usm.maine.edu/smp/about/index), School Reform Initiative (www.schoolreforminitiative.org) and the National School Reform Faculty (www.nsrfharmony.org), which developed one version of a professional learning community called Critical Friends Groups (CFGs). In their work conceptualizing CFGs, the National School Reform Faculty laid much of the groundwork for shifting the nature of the dialogue between and among teachers about their practice in schools and is responsible for training thousands of teachers to focus on developing collegial relationships, encouraging reflective practice, and rethinking leadership in restructuring schools. The CFGs provide deliberate time and structures dedicated to promoting adult professional growth that is directly linked to student learning.

By their own nature, then, PLCs enhance the possibilities for conducting an inquiry and cultivating a community of inquirers. In fact, in our companion book to this text, *The Reflective Educator's Guide to Professional Development* (Dana & Yendol-Hoppey, 2008a), we describe a model for school-based professional development that combines some of the best of what we know about action research and professional learning communities and, in the process, address a weakness that has been defined in traditional professional development practices. We name this new entity the "inquiry-oriented professional learning community" and define it as a group of six to twelve professionals who meet on a regular basis to learn from practice through structured dialogue and engage in continuous cycles through the process of action research (articulating a wondering, collecting data to gain insights into the wondering, analyzing data, making improvements in practice based on what is learned, and sharing learning with others). The book *Inquiry: A Districtwide Approach to Staff and Student Learning* illustrates inquiry-oriented learning communities of teachers and principals and how they can be set up across an entire district (Dana, Thomas, & Boynton, 2011).

Student Teaching and/or Other Clinical Experiences

If you are a veteran teacher, you likely reminisce about your own student teaching experience as an important feature of your preservice education. Similarly, if you are a prospective teacher, you have likely looked forward to your field experience and student teaching with great anticipation. According to a report prepared by the National Council for the Accreditation of Teacher Education (2010), a paradigmatic shift in teacher preparation is needed that places a greater emphasis on the clinical experience and learning within the field. According to the report,

> to prepare effective teachers for 21st century classrooms, teacher education must shift away from a norm which emphasizes academic preparation and course work loosely linked to school-based experiences. Rather, it must move to programs that are fully grounded in clinical practice and interwoven with academic content and professional courses. (p. ii)

Within the report, teacher inquiry is highlighted as an important tool for strengthening clinical practice, and an inquiry stance is an orientation believed to strengthen teacher preparation. Mounting evidence suggests that field experiences that include engagement in teacher inquiry enhance the quality of teacher preparation (see, e.g., Dana & Silva, 2001; Wilson, Floden, & Ferrini-Mundy, 2001). The reason for this is quite logical. Given that the act of teaching is an enormously complex endeavor, "learning to teach" in any brief, simple, and step-by-step way is impossible. As a preservice teacher, you are immersed in the complexities of teaching for the first time in clinical experiences. Immersion in this complexity naturally encourages engagement in inquiry, as questions about teaching, schools, and schooling abound. As you student teach, inquiry can help you learn to identify the complexities and problems inherent in teaching and tease these complexities apart to gain insights into your work with children. Given the comprehensive nature of teaching, identifying complexities and striving to understand them is a process that lasts an entire career. Engagement in teacher inquiry as an integral component of field preparation enhances the power of the field experience. As you simultaneously learn to teach and to inquire into teaching, these two processes become intricately intertwined. When teaching and inquiry become synonymous, you have cultivated an inquiry stance toward teaching that will serve you, your students, and the field of education well for the duration of your career!

Professional Development Schools and Other Networks

Since the late 1980s, a specialized setting for student teaching and other field experiences has emerged—professional development schools (PDS). According to Darling-Hammond (1994), professional development schools

> aim to provide new models of teacher education and development by serving as exemplars of practice, builders of knowledge, and vehicles for communicating professional understanding among teacher educators, novices, and veteran teachers. They support the learning of prospective and beginning teachers by creating settings in which novices enter professional practice by working with expert practitioners, enabling veteran teachers to renew their own professional development and assume new roles as mentors, university

> adjuncts, and teacher leaders. They allow school and university educators to engage jointly in research and rethinking of practice, thus creating an opportunity for the profession to expand its knowledge base by putting research into practice—and practice into research. (p. 1)

In a PDS then, teacher inquiry is a central part of the professional practice of all members—practicing teachers, prospective teachers, administrators, and university teacher educators. This transition to inquiry is the mechanism for reinventing schools as "learning" organizations. Hence, a PDS culture supports and celebrates the engagement of teachers and other PDS professionals in constructing knowledge through intentional, systematic inquiry and using that knowledge to continually reform, refine, and change the practice of teaching (Dana, Smith & Yendol-Hoppey, 2011; Yendol-Hoppey & Dana, 2008).

Professional development schools have organized themselves through a national network, the National Association of Professional Development Schools (NAPDS). The vision of this organization is to serve as an advocate for those dedicated to promoting the continuous development of collaborative P–12 school and higher education relationships. The work of teacher inquiry remains a vital component of the NAPDS, and teacher-inquirers regularly share their work at the NAPDS conference

In addition to NAPDS, a variety of other educational networks support the teacher inquiry movement. For example, the National Network for Educational Renewal (NNER) embraces the work of inquiry as a central component to school improvement. The network's goal is to improve the quality of P–12 education for thoughtful and informed participation in a democracy. One way this improvement occurs is through developing programs that encourage teachers to inquire into the nature of teaching and schooling, with the intention that practitioners will make inquiry a natural aspect of their professional lives. These are just a few of the larger national networks that support teacher inquiry.

HOW DOES MY ENGAGING IN TEACHER INQUIRY HELP SHAPE THE PROFESSION OF TEACHING?

Regardless of your method of inquiry, the subject of your inquiry, or the context of your inquiry, what is most important is that you do inquire! According to numerous leading scholars on teaching and teacher education, such as Aronowitz and Giroux (1985), Greene (1986), and Zeichner (1986), "teachers are decision makers and collaborators who must reclaim their roles in the shaping of practice by taking a stand as both educators and activists" (Cochran-Smith, 1991, p. 280). Inquiry is a core tool teachers

evoke when making informed and systematic decisions. Through the inquiry process, teachers can support with evidence the decisions they make as educators and, subsequently, advocate for particular children, changes in curriculum, and/or changes in pedagogy. Inquiry ultimately emerges as action and results in change.

As a prospective teacher, practicing teacher, or mentor-teacher interested in problematizing your professional practice, you have committed to simultaneous renewal and reform of the teaching profession and teacher education! Teacher inquiry is the ticket to enact this reform! Cochran-Smith and Lytle (1993) claim that in any classroom where teacher inquiry is occurring, "there is a radical, but quiet kind of educational reform in process" (p. 101). Your individual engagement in teacher inquiry is a contribution to larger educational reform, a transformation of the teaching profession . . . so let us begin the journey!

CHAPTER 1 EXERCISES

1. Look at some examples of teacher research published in some of the collections we mentioned in this chapter or that you may find in journals such as *Voices of Practitioners*, *Action Research*, and *Networks: An Online Journal for Teacher Research*. What are some things you notice about the process of inquiry you will explore in this book from looking at actual examples of teachers' research?
2. Start a journal to trace your own inquiry journey as you proceed through this book. For your first entry, capture both the excitement and enthusiasm you may be feeling for the inquiry process after reading Chapter 1, as well as any apprehension or trepidation you feel about the process. Use these sentence starters as your journal prompts:
   - My greatest hopes for engaging in the inquiry process include . . .
   - My greatest fears for engaging in the inquiry process include . . .

   Discuss your responses with colleagues and continue to use your journal throughout the text to respond to the exercises provided in each chapter. When you actually begin your own inquiry, your journal can evolve into a way to collect data (covered in Chapter 4).

Dana, N.F., & Yendol-Hoppey, D. (2009). *The reflective educators guide to classroom research*. Thousand Oaks, CA: Corwin.